

THE MOVE TO SD-WAN MAKES ZERO TRUST A BEST PRACTICE

Zero Trust Architecture: No Longer a 'Nice to Have'

Given the threat to national security, data, and the overall critical national infrastructure (CNI), government agencies are turning to SD-WAN to modernise their wide area networks (WAN). In fact, according to research from [Global Market Insights](#), the SD-WAN market is expected to grow at a 60% compound annual growth rate from 2018 to 2025 – in large part due to the rise in the number of data centres, which have increased the demand for network virtualisation solutions to optimise the flow of data between several data centres, office branches and the cloud. Other factors accelerating market growth are increasing migration toward cloud platforms; the rising trend of Bring Your Own Device (BYOD); and latterly the need for flexible and remote working, which drive the demand for software-defined solutions to securely connect various devices from multiple locations and offer centralised management of these devices¹.

As Paul German, CEO, Certes Networks, comments: “Government and, in the US, federal agencies in particular have a need to collect and transport highly sensitive data from a multitude of sources, across numerous locations, contending with remote employees that are also rarely located in a single site. As such, strong connectivity is essential in today’s government, and agencies are turning to a variety of methods – from WANs to SD-WANs – to keep communications safe and moving”. The benefits and flexibility of these wide-area network infrastructures will simplify network monitoring and management and make government networks more secure and resilient.

Overcoming Challenges

Traditionally, organisations have operational WANs over MPLS lines leased from major telecoms providers. To ensure high availability, many organisations lease two lines from two separate carriers for a failsafe. Some agencies evolve towards SD-WAN run over a standard broadband connection and use 4G/5G wireless as a backup. This may give agencies more control over the networks, but SD-WAN can complement or replace legacy WAN.

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The transition from WANs running over MPLS to SD-WAN will not happen rapidly. Three-year telecom contracts need to expire, routers and switches must be updated and many organisations fear their entire network infrastructure will have to be replaced, perceiving it to be far too complex. However, maintaining fast, reliable connections to government regional offices is crucial, especially as organisations expand their use of VoIP, adopt cloud-based office automation and migrate their constituent services online.

Crypto-segmentation

However, it doesn't have to be complicated. Government agencies can make the move toward SD-WAN and Zero Trust without the complexity that comes with the deployment of an automated infrastructure. The vulnerabilities and threats associated with trying to protect large volumes of data moving across a vast multi-user network require a security strategy that is simple, scalable and uncomplicated in order to avoid any disruption to the national network architecture and the critical services provided by these institutions.

However, even within Zero Trust zones, advanced persistent threats can go undetected for months ([266 days average to detect/contain](#)) during which sensitive data is compromised. Crypto-segmentation can remove the implicit trust and help prohibit lateral movements. Crypto-segmentation creates small zones by which organisations can separate applications and workloads from each other to secure each one individually.

Modernising network infrastructure with Zero Trust architecture functionality and SD-WAN will help government organisations get closer to a secure, Zero Trust Architecture by 2021. Government-approved suppliers who are able to deliver technologies that help make this transition easier, without disruption, will offer the benefits and flexibility needed to facilitate this adoption more rapidly.

1. <https://www.gminsights.com/pressrelease/software-defined-wide-area-network-sd-wan-market>



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